

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/04287

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N5/00 C12N5/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

MEDLINE, EPO-Internal, WPI Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R. IAN FRESHNEY: "Culture of animal cells, A manual of basic technique, third edition" 1994, WILEY-LISS INC., NEW YORK US XP002270293 page 161 -page 166 ---	1-45
X	MELLADO-DAMAS N ET AL: "Ex-vivo expansion and maturation of CD34-positive hematopoietic progenitors optimization of culture conditions" LEUKEMIA RESEARCH, vol. 23, no. 11, November 1999 (1999-11), pages 1035-1040, XP002270289 ISSN: 0145-2126 the whole document --- -/--	30-45

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

16 February 2004

Date of mailing of the international search report

01/03/2004

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INTERNATIONAL SEARCH REPORT

Internat. Application No.
PCT/GB 03/04287

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZIMRIN A B ET AL: "Models of in vitro angiogenesis: endothelial cell differentiation on fibrin but not matrigel is transcriptionally dependent." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS. US, vol. 213, no. 2, 15 August 1995 (1995-08-15), pages 630-638, XP002270290 ISSN: 0006-291X the whole document	17-19
X	EINSPANIER R ET AL: "First identification of caldesmon transcripts in bovine oviduct epithelial cells in vitro by means of an RNA differential display technique examining culture-induced expression changes." REPRODUCTION IN DOMESTIC ANIMALS = ZUCHTHYGIENE. GERMANY OCT 2001, vol. 36, no. 5, October 2001 (2001-10), pages 230-235, XP002270291 ISSN: 0936-6768 the whole document	17-19
A	US 6 001 585 A (GRAMER MICHAEL J) 14 December 1999 (1999-12-14) the whole document	1-45
A	US 2001/051834 A1 (DOMB ABRAHAM J ET AL) 13 December 2001 (2001-12-13) the whole document	10,11, 34,35, 40-45
A	JORDAN F L ET AL: "METHOD FOR THE IDENTIFICATION OF BRAIN MACROPHAGES-PHAGOCYTIC CELLS IN-VITRO" JOURNAL OF NEUROSCIENCE RESEARCH, vol. 26, no. 1, 1990, pages 74-82, XP008027664 ISSN: 0360-4012 the whole document	5-7

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-29

Methods for determining the effect of a plurality of culture conditions on a cell, comprising subdividing or pooling groups of cultures. Methods of identifying differentially expressed genes using said optimization method. Method of producing said identified gene. Methods of inducing a cellular process modulating the expression of said identified gene. Methods for identifying the state of a cellular process using one or more of said identified genes. Methods of inducing a cellular process by determining the effect of one or more culture conditions using the optimization method of above and exposing cells to the conditions which induce the cellular process. Methods of identifying agents capable of inducing a cellular process using said optimization method and identifying the agents. Methods of preparing said identified agents.

2. Claims: 30 completely, 32-36 partially

Methods of culturing stem cells in vitro comprising combining cultures of cells grown under different conditions.

3. Claims: 31 completely, 32-36 partially

Methods of culturing stem cells in vitro comprising splitting a culture of stem cells and continue culturing under two or more different sets of culture conditions.

4. Claims: 37-45

Methods of culturing stem cells, comprising growing said cells adhered to a microcarrier or bead. Said method wherein the microcarriers are transferred from one culture to the other.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 19, 28

Present claim 19 relates to methods for producing a nucleic acid comprising identifying a gene with a certain method and producing the coding region. The gene is defined by reference to a desirable characteristic or property, namely being identified with a certain method.

Claim 28 relates to a method for preparing an agent, wherein said agent is defined by reference to a desirable characteristic or property, namely being capable of inducing a cellular process as being determined by a certain method.

The claims cover all methods having this characteristic or property, whereas the application provides no support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for such methods. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the methods by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, no search has been carried out for those claims.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/04287

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 19, 28
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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International application No
PCT/GB 03/04287

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6001585	A	14-12-1999	NONE	
US 2001051834	A1	13-12-2001	US 2001014475 A1	16-08-2001
			US 6637437 B1	28-10-2003
			US 6378527 B1	30-04-2002
			AU 3626700 A	09-10-2000
			CA 2366669 A1	28-09-2000
			EP 1171057 A1	16-01-2002
			WO 0056251 A1	28-09-2000
			US 2002123142 A1	05-09-2002
			US 2002133235 A1	19-09-2002
			US 2002012705 A1	31-01-2002